Department of Commerce • National Oceanic & Atmospheric Administration • National Weather Service

NATIONAL WEATHER SERVICE ALASKA REGION SUPPLEMENT 05-2002
APPLICABLE TO NWSI 10-311
JANUARY 7, 2003

Operations and Services
Marine and Coastal Weather Services, NWSPD 10-3
Offshore, NAVTEX, and High Seas Marine Forecast Services, NWSI 10-311

ALASKA OFFSHORE, NAVTEX, AND HIGH SEAS MARINE FORECAST SERVICES

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OPR: W/AR1x2 (A. Devaris) **Certified by:** W/AR1 (J. Partain)
Type of Issuance: Initial

SUMMARY OF REVISIONS: This instruction supercedes Regional Operations Manual Letter (ROML) A-10-99, "Marine Services Program," dated November 9, 1999, filed with Weather Service Operations Manual (WSOM) Chapter D-51. The following Instruction Memorandums filed with ROML A-10-99 are also superseded: AR-00-01 dated 1/10/00, AR-00-02 dated 2/1/00, AR-00-03 dated 4/4/00, AR-00-08 dated 8/9/00, AR-01-01 dated 1/17/01, and AR-01-03 dated 4/16/01.

The section numbers in this supplement refer to the section numbers in Instruction 10-311.

Signed by Laura K. Furgione for 12/24/02
Richard C. Przywarty Date
Regional Director

Alaska Offshore, NAVTEX, and High Seas Marine Forecast Services

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1. Purpose. The offshore marine forecast service procedures in the Alaska Region are described to augment the procedures in NWS Instruction 10-311.

2. Responsibilities. NWSI 10-302 lists areas of responsibility for offshore forecast services provided by WFO Anchorage. In addition, WFO Fairbanks' area of responsibility extends from the Bering Strait to Mackenzie Bay, covering the Chukchi and Beaufort Seas between 60 and 200 nautical miles offshore.

3. Offshore Waters Forecasts (OFF) - Contents and Procedures.

3.1 OFF - Product Issuance. WFO Anchorage issues offshore forecasts for their area of responsibility twice per day at 1100 UTC and 2300 UTC. These times translate to 2:00 a.m. (3:00 a.m.) and 2:00 p.m. (3:00 p.m.) Alaska Standard (Daylight) Time.

WFO Fairbanks issues offshore forecasts for the Chukchi and Beaufort Seas on a customer-driven basis. Requests for this offshore service should be coordinated through the Regional Marine Program Manager. Upon request, WFO Fairbanks issues an offshore forecast for the requested waters within the Fairbanks area of offshore responsibility. This offshore forecast is appended to the coastal waters forecast (CWF, FZAK66) under the heading "SPECIAL

OFFSHORE FORECAST FOR (the designated area)." The preparation and issuance of subsequent offshore forecasts should continue as part of the CWF for the period required by the request.

All OFF products include the forecast periods shown below. Use the day of the week to describe forecast periods instead of terms like "today," "tonight," etc. Example: for a change expected Wednesday night in a forecast issued Wednesday afternoon, use "Wednesday night," not "tonight."

The early morning forecasts will cover:

Forecast - Day 1	4 AM to 6 AM the following day (26 hours)
Outlook - Day 2	6 AM to 6 AM the following day (24 hours)
Extended Forecast -	
Day 3	6 AM to Midnight (18 hours)
Day 4	Midnight to Midnight (24 hours)
Day 5	Midnight to Midnight (24 hours)

The late afternoon forecasts will cover:

Forecast - Day 1	4 PM to 6 PM the following day (26 hours)
Outlook - Day 2	6 PM to 6 PM the following day (24 hours)
Extended Forecast -	
Day 2 Evening	6 PM to Midnight (6 hours) (*Optional*)
Day 3	Midnight to Midnight (24 hours)
Day 4	Midnight to Midnight (24 hours)
Day 5	Midnight to Midnight (24 hours)

3.2 OFF - Content/Format. Offshore waters forecasts in Alaska will follow the format given below.

OFFSHORE FORECAST
NATIONAL WEATHER SERVICE (CITY) (STATE)
(VALID TIME) AM/PM (LOCAL TIME ZONE) (DAY) (DATE)
FORECAST VALID TO (TIME) AM/PM AND OUTLOOK TO (TIME) AM/PM.

(SYNOPSIS UGC CODE)-(EXPIRATION TIME)-
(MARINE AREA) SYNOPSIS. (TEXT)

(AREAL UGC CODE[S])-(EXPIRATION TIME)-
(MARINE AREA[S])

FORECAST.
(HEADLINE - if needed)
(FORECAST CONDITIONS FOR DAY 1). OUTLOOK (OUTLOOK CONDITIONS FOR DAY 2).

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(EXTENDED UGC CODE)-(EXPIRATION TIME)-
OFFSHORE EXTENDED FORECAST FOR (FORECAST AREA)
(TEXT)

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3.2.1 Synopsis. A complete synopsis will be included in each OFF product. The synopsis covers the major weather features affecting the forecast area for the 50-hour period encompassing both the forecast period and the outlook period. The synopsis is broadcast over the marine radio; therefore, the text will focus on features directly affecting the areas covered in the product and include complete and grammatically correct sentences.

All synopses will be meteorologically consistent with other products issued by the WFO. Features included in synopses are those agreed to through coordination among the WFOs. The locations of these features are specified by using latitude/longitude coordinates only.

3.2.2 Headlines. Headlines will be included at the beginning of each marine segment to emphasize significant marine hazards and to denote sustained wind categories (GALE, STORM, HURRICANE FORCE) that apply to the Day 1 forecast period. Headlines do not contain a temporal component (i.e., GALE WARNING THROUGH TONIGHT) since only those hazards which are expected to affect the first forecast day should be headlined.

The headline(s) will be inserted into the forecast for each marine area following the format below. Note: Ellipses (...) are not used as in the public forecast products.

> FORECAST.
> EAST OF 147W.
> HURRICANE FORCE WIND WARNING.
> (TEXT...)

In addition to the headlines listed in NWSI 10-311, Alaska Region offices will include a headline for ASHFALL ADVISORY whenever an aviation SIGMET is in effect over a corresponding marine area. The advisory headline should be removed when ash is no longer considered to be a threat to surface conditions or the related SIGMET is cancelled.

Headlined warning statements, such as HEAVY FREEZING SPRAY WARNING, do not have to be repeated in the body of the text portion.

3.2.3 Day 1 through Day 2 Forecast Period. The Day 1 through Day 2 period of the offshore waters forecast follows a narrative format that emphasizes trends and changes. Example: SOUTHWEST WINDS 25 KT DIMINISHING TO NORTHWEST 15 KT OR LESS TUE EVENING. SEAS 7 FT SUBSIDING TO 4 FT OR LESS TUE EVENING.

The first 26 hours of the forecast are the most detailed and will highlight the most critical conditions. Include the following elements: wind, sea state, significant weather, and icing. To keep forecasts concise, a maximum of two wind conditions (a condition contains both direction

and speed) should be forecast in the 26-hour narrative forecast period. Wind and sea conditions may be defined relative to a weather feature, such as a front or low center, to better convey the forecast. The feature must be described in the synopsis.

The 24-hour outlook should contain a forecast of wind and sea state only. A single term indicating the trend may be included in the outlook. Example: WIND INCREASING TO SOUTHWEST 40 KT. SEAS BUILDING TO 16 FT.

3.2.4 3-5 Day Forecast Periods. An extended forecast section covering days 3, 4 and 5 is given in each OFF product. The extended forecast will describe the major weather features expected to affect the forecast area during the 3–5 day period. Wind should be mentioned in the forecast only for GALE, STORM, and HURRICANE FORCE categories.

3.2.5 Codes for the Marine Table. A forecast and warning summary table is sent on HF marine radio facsimile for the benefit of marine users. A 12- and 24-hour forecast summary should follow the offshore forecasts. The summary includes the forecaster's best estimate of the predominant conditions that will occur within the forecast area at the summary valid time. The summary will consist of the following items:

Warning – Include the warning type expected to be in effect at the valid time. Do not include volcanic ash. For Hurricane Force use "HURC," for Storm use "STM," for Gale use "GALE." If no warnings are expected, enter "NONE."

Wind – Predominant direction to 8 point compass; wind speed in knots. Use "V" for variable direction.

Seas – Significant wave height in feet; use only one value.

Weather – Predominant weather condition; use one or two words only. Authorized terms and their abbreviations are listed in 3.3.3 below. If no significant weather is expected, leave at least one blank space between the delimiters.

Icing – When icing is expected, use "ICING" or "HEAVY," corresponding to the marine forecast. If no icing is expected, use "NONE."

3.3 OFF - Text Forecast Parameters.

3.3.1 Winds. Wind forecasts represent the predominant sustained wind direction and speed for the forecast period. Forecast changes in wind direction should be for changes of 90 degrees or more, and forecast changes in wind speed should be for changes of 10 knots or more. The only speed transition terms to be used are "INCREASING" and "DECREASING." Direction transition terms ("BECOMING," "SHIFTING," "SWITCHING," etc.) should be used to add clarity to the forecast trends.

Under generally light wind conditions (less than 20 knots) the term "VARIABLE" may be used in lieu of a specific wind direction if a predominant direction can not be determined. The wind speed may be represented as "15 KT OR LESS" to describe generally light wind conditions.

When there are significant differences expected between sustained winds and gusts, the OFF should contain either a specific wind gust speed or a more generic phrase to describe the gusty condition of the winds, e.g., "WITH HIGHER GUSTS." Gusts should not be forecast unless they are expected to be at least 15 knots greater than the sustained wind.

3.3.2 Seas. The only transition terms to be used are "BUILDING" and "SUBSIDING."

Sea state forecasts will be included for marine areas or portions of marine areas south or west of the ice edge. For other marine areas where a concentration of 7/10 or more of sea ice is expected, forecasts of sea state are usually omitted; however, if the area has at least 10% contiguous open water, sea state forecasts may be given.

3.3.3 Significant Weather/Visibility. Alaska Region offices use only the following weather terms and abbreviations:

Weather Term	Abbreviation
Rain	RAIN
Snow	SNOW
Rain and Snow	RASN
Showers	SHWRS
Thunderstorms	TSTM
Fog	FOG
Squall	SQLL
Blowing Snow Over Ice-Covered Areas	BLSN

Table 1 – Acceptable Weather Terms and Abbreviations to be Used in the Marine Table.

Modifiers of weather terms may be used if they describe intensity or temporal conditions significant to marine operations, e.g., "Heavy (rain/snow)," "Dense (fog)," etc. Terms such as "periods of" or "areas of" will not be used.

3.3.4. Icing. The Overland Nomograms will be used to forecast freezing spray in the Alaska Region. Use the nomogram that corresponds to the coldest sea surface temperature in the marine area (http://www.weather.nps.navy.mil/~psguest/polarmet/vessel/predict.html#nomogram). The following thresholds will be used:

Freezing Spray – Ice accumulating at a rate less than 0.3 inches per hour (icing class "light").

Heavy Freezing Spray – Ice accumulating at a rate greater than 0.3 inches per hour (icing class "moderate" or greater).

APPENDIX A - Examples of NWS Alaska Offshore Forecasts

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1. Offshore Waters Forecast.

FZPN01 PANC 270951

OFFSHORE FORECAST
NATIONAL WEATHER SERVICE ANCHORAGE AK
3 AM ADT FRI SEP 27 2002
FORECAST VALID TO 5 AM SAT AND OUTLOOK TO 5 AM SUN.

PKZ305-280000-
GULF OF ALASKA OFFSHORE SYNOPSIS.
A FRONT IN THE EASTERN GULF OF ALASKA WEAKENS THROUGH SUNDAY.
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PKZ385-280000-
GULF OF ALASKA OFFSHORE...NORTH OF 55 DEGREES NORTH...OUTSIDE COASTAL WATERS.

FORECAST. EAST OF 140W.
VARIABLE WINDS INCREASING TO WEST TO NORTHWEST 15 TO 25 KT FRIDAY AFTERNOON. SEAS 4 FT BUILDING TO 10 FT SATURDAY MORNING. SHOWERS AND FOG. OUTLOOK NORTHWEST WINDS 25 KT. SEAS 10 FT.

WEST OF 140W.
SOUTHWEST TO WEST WINDS 20 TO 30 KT. SEAS 10 TO 13 FT. SCATTERED SHOWERS. OUTLOOK WEST WINDS 30 KT. SEAS 13 FT.
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PKZ395-280000-
OFFSHORE EXTENDED FORECAST FOR THE GULF OF ALASKA
VALID SUN SEP 29 THROUGH TUE OCT 1.

A STRONG NORTH PACIFIC LOW MOVES OVER THE NORTHERN GULF OF ALASKA TUESDAY.

GALES LATE MONDAY AND TUESDAY.
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PKZ300-280000-
BERING SEA OFFSHORE SYNOPSIS.

A 977 MB LOW NEAR 62N 167W MOVES ONSHORE FRI AFTERNOON NEAR 65N 165W. A 1002 MB LOW NEAR 56N 162E FRI AFTERNOON INTENSIFIES TO 1000 MB NEAR 55N 175E FRI NIGHT AND WEAKENS TO 1005 MB AS IT MOVES ONSHORE SAT NIGHT NEAR 63N 174W.
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PKZ380-280000-
BERING SEA OFFSHORE...SOUTH CENTRAL BERING SEA EAST OF THE INTERNATIONAL DATELINE...OUTSIDE COASTAL WATERS

FORECAST.
EAST OF 175W.
GALE WARNING.
WEST TO SOUTHWEST WINDS 30 TO 40 KT DIMINISHING TO SOUTHWEST 20 TO 30 KT FRI EVENING. SEAS 13 TO 18 FT SUBSIDING TO 9 TO 14 FT FRI NIGHT. SHOWERS ENDING FRI EVENING. OUTLOOK SOUTHWEST WINDS 30 KT. SEAS 13 FT.

WEST OF 175W.
WEST TO SOUTHWEST WINDS 20 TO 30 KT. SEAS 7 TO 13 FT. RAIN BEGINNING FRI AFTERNOON. OUTLOOK WEST WINDS 25 KT DIMINISHING. SEAS 10 FT SUBSIDING.
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PKZ390-280000-
OFFSHORE EXTENDED FORECAST FOR THE SOUTH CENTRAL BERING SEA
VALID SUN SEP 29 THROUGH TUE OCT 1.

HIGH PRESSURE BUILDS INTO THE BERING SUN AND MON. A LOW PRESSURE CENTER WILL MOVE INTO THE WESTERN BERING MON NIGHT AND TUE. GALES ARE EXPECTED IN THE WESTERN BERING TUE.
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